

STEM

Program of Study Course Sequence	9th Grade	10th Grade	11th Grade	12th Grade
Biology*	Biology (1 credit)	Chemistry (1 credit) <i>Required Prerequisite:</i> <i>1 Science and Algebra 1</i>	Physics (1 credit) AND Anatomy and Physiology (1 credit) <i>Prerequisite:</i> <i>2 credits in Science</i>	AP Biology (1 credit) <i>Prerequisite:</i> <i>3 credits in Science</i>
Chemistry*	Biology (1 credit)	Chemistry (1 credit) <i>Required Prerequisite:</i> <i>1 Science and Algebra 1</i>	Physics (1 credit) AND AP Biology (1 credit) <i>Prerequisite:</i> <i>2 credits in Science</i>	AP Chemistry (1 credit) <i>Prerequisite:</i> <i>3 credits in Science</i>
Environmental Science*	Biology (1 credit)	Chemistry (1 credit) <i>Required Prerequisite:</i> <i>1 Science and Algebra 1</i>	Physics (1 credit) AND Aquatic Science (1 credit) <i>Prerequisite:</i> <i>2 credits in Science</i>	Environmental Systems OR AP Environmental Science (1 credit) <i>Prerequisite:</i> <i>3 credits in Science</i>
Physics*	Biology (1 credit)	Chemistry (1 credit) and AP Physics I (1 credit) <i>Required Prerequisite:</i> <i>1 Science and Algebra 1</i>	AP Physics II (1 credit) <i>Prerequisite:</i> <i>Physics I and Pre-Cal</i>	AP Physics C: Electricity and Magnetism (1 credit) OR AP Physics C: Mechanics (1 credit) <i>Prerequisite:</i> <i>Physics I and Pre-Cal</i>
Space Science*	Biology (1 credit)	Chemistry (1 credit) <i>Required Prerequisite:</i> <i>1 Science and Algebra 1</i>	Physics (1 credit) AND Earth and Space Science (1 credit) <i>Prerequisite:</i> <i>2 credits in Science</i>	Astronomy (1 credit) <i>Prerequisite:</i> <i>3 credits in Science</i>

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Cybersecurity	Computer Science Essentials (1 credit) <i>Prerequisite: Algebra I</i>	Cybersecurity (1 credit) <i>Prerequisite: Computer Science Essentials</i>	Digital Forensics (1 credit) AND Computer Maintenance (1 credit) <i>Prerequisite: Cybersecurity</i>	Cybersecurity Capstone (1 credit) <i>Prerequisite: Digital Forensics and Computer Maintenance</i>	Computer Maintenance (1 credit), Digital Media (1 credit), Professional Communications (.5 credit) AND Touch Systems Data Entry (.5 credit)
Programming and Software Development	Pre-AP Computer Science I (1 credit) <i>Prerequisite: Algebra I</i>	AP Computer Science (2 credits) <i>Prerequisite: Computer Science I</i>	Computer Science II (1 credit) AND Computer Science III (1 credit) <i>Prerequisite: AP Computer Science</i>	Practicum in Information Technology: Programming and Software Development (2 credits) <i>Prerequisite: Computer Programming I and II</i>	

*AP Computer Science is also Math credit. It is a **2-credit class** that takes up **one period**.

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Engineering	<p>Introduction to Engineering Design (1 credit) <i>Prerequisite: Algebra I</i></p>	<p>Engineering Science (1 credit) <i>Prerequisite: Introduction to Engineering Design, Algebra I, and Biology</i></p>	<p>Choose 2 credits from the following 5 courses:</p> <p>Aerospace Engineering (1 credit), Digital Electronics (1 credit), Civil Engineering (1 credit), Robotics I (1 credit), Introduction to Unmanned Aerial Vehicles (1 credit) <i>Prerequisite: Engineering Science, Algebra I, and Geometry</i></p>	<p>Option 1: Practicum in Science, Technology, Engineering, and Math (2 credits)</p> <p>Option 2: Engineering Design and Development (1 credit) AND 1 credit from the following 3 courses: Robotics II (1 credit), Computer Integrated Manufacturing (1 credit), AP Physics C: Electricity and Magnetism (1 credit) <i>Prerequisite: 3 credits in Engineering Program</i></p>

*Digital Electronics and Robotics II can also count as **Math** credits.

*Engineering Science and AP Physics C: E & M can also count as **Science** credits.

*It is **not** recommended that students take Engineering Science (POE) and Robotics at the same time. Engineering Science should be taken **first** (as it is written in the pathway).

*Students should take **2** credits in their Junior year and **2** credits in the Senior year, just as the pathway is written.

*Students **MUST** have Practicum or EDD in their senior year or they won't get a STEM endorsement.

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Industrial Engineering	Principles of Manufacturing (1 credit)	Diversified Manufacturing I (1 credit) AND Manufacturing Engineering Technology I (1 credit) <i>Prerequisite:</i> <i>Principals of Manufacturing</i>	Diversified Manufacturing II (2 credits) AND Manufacturing Engineering Technology II (2 credits) <i>Prerequisites:</i> <i>Diversified Manufacturing I and Manufacturing Engineering Tech I</i>	Practicum in Manufacturing (2 credits) <i>Prerequisite:</i> <i>3 credits in the Industrial Engineering program, including Diversified Manufacturing II and Manufacturing Engineering Technology II</i>	Introduction to Welding (1 credit), Computer Integrated Manufacturing (1 credit) Applied Math for Technical Professionals (1 credit)

*Manufacturing Engineering Technology II and Applied Math for Technical Professionals satisfies a math credit requirement for students on the Foundation High School Program.

*Successful completion of the Industrial Engineering pathway will fulfill requirements of the Business and Industry and STEM Endorsement if math and science requirements are met.

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Math*	Required Algebra I , Geometry, and Algebra II		<u>PICK TWO:</u> Pre-Calculus, Statistics, Calculus, Linear Algebra and Multivariable Calculus <i>Choose the appropriate level and check prerequisites.</i>	